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Date: October 23, 2006 /Jessica Sexton/
Jessica Sexton

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:	
Applicants(s): Michael Slutsky *et al.*	Examiner: Ahshik Kim
Serial No: 10/034,072	Art Unit: 2876
Filing Date: December 28, 2001	

Title: ASIC FOR SUPPORTING MULTIPLE FUNCTIONS OF A PORTABLE DATA COLLECTION DEVICE

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF

Dear Sir:

Applicants' representative submits this Reply Brief in response to the Examiner's Answer dated September 7, 2006. In the event any additional fees may be due and/or are not covered by the credit card, the Commissioner is authorized to charge such fees to Deposit Account No. 50-1063 [SYMBP102US].

I. Real Party in Interest (37 C.F.R. §41.37(c)(1)(i))

The real party in interest in the present appeal is SYMBOL TECHNOLOGIES, INC., the assignee of the present application.

II. Related Appeals and Interferences (37 C.F.R. §41.37(c)(1)(ii))

Appellants, appellants' legal representative, and/or the assignee of the present application are not aware of any appeals or interferences which may be related to, will directly affect, or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims (37 C.F.R. §41.37(c)(1)(iii))

Claims 12-20 have been withdrawn. Claims 1-11 stand rejected by the Examiner. The rejection of claims 1-11 is being appealed.

IV. Status of Amendments (37 C.F.R. §41.37(c)(1)(iv))

Subsequent to the final rejection dated November 29, 2005, the Title was amended to more clearly reflect the invention. The amendment to the title has been entered.

V. Summary of Claimed Subject Matter (37 C.F.R. §41.37(c)(1)(v))

A. Independent Claim 1

Independent claim 1 recites a portable electronic device comprising: an imager coupled to the portable electronic device; a laser scanner coupled to the portable electronic device; and an application specific integrated circuit (ASIC) comprising circuitry for communicating with the imager and laser scanner. (*See e.g.*, page 4, line 19-page 5, line 10)

B. Claim 8

Claim 8 recites the ASIC of claim 4, the smart and dumb battery being a Ni-MH battery.. (*See e.g.*, page 18, lines 9-16)

C. Claim 9

Claim 9 recites the ASIC of claim 4, the smart and dumb battery being a Li-Ion battery.. (*See e.g.*, page 18, lines 9-16)

D. Claim 10

Claim 10 recites the ASIC of claim 4, the modular memory IDE interface function including a NAND memory function. (*See e.g.*, page 20, line 24-page21, line 20)

E. Claim 11

Claim 11 recites the ASIC of claim 4, the modular memory IDE interface function including a CF card function. (*See e.g.*, page 20, line 24-page21, line 20)

VI. Grounds of Rejection to be Reviewed (37 C.F.R. §41.37(c)(1)(vi))

A. Whether claims 1-7 are patentable under 35 U.S.C. §102(b) over Callaghan *et al.* (US 6,058,304).

B. Whether claims 8 and 9 are patentable under 35 U.S.C. §103(a) over Callaghan *et al.* in view of Kunert *et al.* (US 6,109,528).

C. Whether claims 10-11 are patentable under 35 U.S.C. §103(a) over Callaghan *et al.* in view of Meier *et al.* (US 6, 561,428).

VII. Argument (37 C.F.R. §41.37(c)(1)(vii))

A. Rejection of Claims 1-7 Under 35 U.S.C. §102(b)

Claims 1-7 stand rejected under 35 U.S.C. §102(b) as being anticipated by Callaghan *et al.* (US 6,058,304). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Callaghan *et al.* does not teach or suggest each and every limitation of applicants' claimed invention.

> For a prior art reference to anticipate, 35 U.S.C. §102 requires that "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (*quoting*

Verdegaal Bros., Inc. v. Union Oil Co., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)).

The subject invention relates to a portable electronic device that can be coupled to multiple additional devices and also containing an ASIC that can communicate with the coupled devices. In particular, independent claim 1 recites ***an imager coupled to the portable electronic device*** and ***a laser scanner coupled to the portable electronic device***. In the Response to Arguments section of the Office Action dated November 29, 2005, the Examiner states "What applicant appears to claim is that they are separate devices (inferring from figure 1). However, the presented claims in the Examiner's view do not claim such portable device." On the contrary, the specification and claim clearly indicate that the imager and laser scanner are two separate and distinct image based data capture devices coupled to the portable electronic device. The imager is an image capture device, such as a charged couple device (CCD) photosensor array imaging device. The laser scanner includes its own laser output and image sensor. Furthermore, the subject claim recites ***an application specific integrated circuit (ASIC) comprising circuitry for communicating with the imager and laser scanner***. Refer to Figure 1 and to page 4, lines 19-23 of the specification which states "Fig. 1 is a high-level schematic illustration of a portable bar code reading terminal 5 employing an ASIC 10 having circuitry 12 for carrying N number of functions (N being an integer). The ***terminal is coupled to M number of devices*** 13 (M being an integer), such as ***an imager, a laser scanner***, a fingerprint reader, etc." Also refer to page 5, lines 4-9 of the specification which states "Furthermore, in conventional systems, two completely different sets of hardware and software were used to route ***data from an imager*** and ***data from a scanner*** to a system. According to an aspect of the present invention, the ASIC 10 ***interfaces with both an imager and a scanner*** and routes the ***data from the two devices*** to the bar code reading terminal 5." These sections of the specification and drawings clearly support the subject claim's recitation of two separate image based data capture devices, an imager and a laser scanner coupled to the terminal, each providing separate data captured from each device to the ASIC.

Contrary to the Examiner's assertions, Callaghan *et al.* does not teach this aspect of the subject claim. Rather, the section of prior art referenced in the Office Action describes a ***single*** image capture device connected to the portable unit, a laser scanning assembly comprised of an

infra-red light source and a light sensor. This would be the equivalent of the laser scanner recited in the claim. Callaghan *et al.* fails to describe a secondary image capture device being an imager connected to the portable unit. Callaghan *et al.* does teach an optical interface that is employed to transmit output data to a printer or communicate with a base unit. However, this is not an image capture device comparable to the imager as taught in the applicants' claimed invention. The optical interface is strictly described as a wireless communication link and is not capable of capturing an image. An image capture device functions by producing an image from light reflecting off of surfaces from a light source. A wireless optical communication interface relies on unobstructed line of sight light pulses being received from an optical transmitter located on a separate device. Furthermore, the prior art reference fails to disclose *an application specific integrated circuit (ASIC) comprising circuitry for communicating with the imager and laser scanner*. Callaghan *et al.* discloses an ASIC that communicates with multiple devices such as a laser scanner, microphone, cellular telephony interface, and an optical interface. However, the cited reference fails to disclose that the ASIC contains circuitry for communicating with both an imager and a laser scanner. Therefore, Callaghan *et al.* fails to disclose *two distinct image capture devices, an imager and a laser scanner, coupled to the portable unit*, each supplying captured image data to *an ASIC that has circuitry for communicating with the imager and laser scanner*.

In view of at least the above, it is respectfully submitted that Callaghan *et al.* does not teach or suggest applicants' claimed invention as recited in independent claim 1 (and claims 2-7 which depend there from). Accordingly, reversal of this rejection is respectfully requested.

B. Rejection of Claims 8 and 9 Under 35 U.S.C. §103(a)

Claims 8 and 9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Callaghan *et al.* in view of Kunert *et al.* (US 6,109,528). It is respectfully submitted that this rejection should be reversed for at least the following reasons. Callaghan *et al.* and Kunert *et al.*, alone or in combination, do not teach or suggest each and every limitation of applicants' claimed invention.

> To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the

> references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *See* MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *See In re Vaeck,* 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Kunert *et al.* does not make up for the aforementioned deficiencies of Callaghan *et al.* with respect to independent claim 1 (which claims 8 and 9 depend from). Rather, Kunert *et al.* describes a single image capture device, a laser scanning assembly. Kunert *et al.* teaches an ASIC connected to a laser and a photo diode. It is arguable whether the laser scanning assembly of Kunert *et al.* has a separate ASIC for driving the laser beam and a separate microcontroller for decoding the reflected light sensed by the photo diode or that the ASIC communicates with both the laser and photo diode. However, this is not pertinent to the primary argument regarding the subject invention. The subject claim clearly recites two distinct image capture devices coupled to the portable electronic device, ***an imager and a laser scanner***. Kunert *et al.*, like Callaghan *et al.,* discloses a laser and a photo diode (image capturing means) as part of a laser scan engine. The laser scan engine is a single image capture device, equivalent to the laser scanner of the applicants' claimed invention. Therefore, it is readily apparent that Callaghan *et al.* individually or in combination with Kunert *et al.* fails to teach or suggest *an imager coupled to the portable electronic device and a laser scanner coupled to the portable electronic device and an application specific integrated circuit (ASIC) comprising circuitry for communicating with the imager and laser scanner*. Accordingly, reversal of this rejection is respectfully requested.

C. Rejection of Claims 10 and 11 Under 35 U.S.C. §103(a)

Claims 10 and 11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Callaghan *et al.* in view of Meier *et al.* (US 6,561,428). It is respectfully submitted that this rejection should be reversed for at least the following reasons. Callaghan *et al.* and Meier *et al.*, alone or in combination, do not teach or suggest each and every limitation of applicants' claimed invention. Meier *et al.* does not make up for the above noted deficiencies of Callaghan *et al.*

with respect to independent claim 1 (which claims 10 and 11 indirectly depend from). Meier *et al.* teaches a method to improve image capture as it relates to an indicia bearing substrates' orientation with respect to the image capture device. The methods of Meier *et al.* employ a single image capture device. Consequently, it is respectfully submitted that that Meier *et al.* individually or in combination with Callaghan *et al.* fails to teach or suggest *an imager coupled to the portable electronic device and a laser scanner coupled to the portable electronic device and an application specific integrated circuit (ASIC) comprising circuitry for communicating with the imager and laser scanner.* Accordingly, reversal of this rejection is respectfully requested.

D. Conclusion

For at least the above reasons, the claims currently under consideration are believed to be patentable over the cited references. Accordingly, it is respectfully requested that the rejections of claims 1-11 be reversed.

If any additional fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [SYMBP102US].

Respectfully submitted,
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VIII. Claims Appendix (37 C.F.R. §41.37(c)(1)(viii))

1. A portable electronic device comprising:

an imager coupled to the portable electronic device;

a laser scanner coupled to the portable electronic device; and

an application specific integrated circuit (ASIC) comprising circuitry for communicating with the imager and laser scanner.

2. The portable electronic device of claim 1, further comprising a data blender adapted to receive data from multiple sources and distribute the data to multiple destinations based on a type or content of the data.

3. The portable electronic device of claim 1, the portable electronic device being a bar code reading terminal.

4. The portable electronic device of claim 1, the ASIC further comprising circuitry for carrying out at least one of the following functions:

power management;

wake up control and power down;

critical suspend shutdown;

warm boot and cold boot;

serial port for WAN radio;

matrix keyboard scanning;

IP security;

analog converters;

touch panel;

smart and dumb battery;

modular memory IDE interface;

fingerprint reader;

USB host; and

magnetic stripe interface.

5. The ASIC of claim 4, the smart and dumb battery function including a gas gauging function

6. The ASIC of claim 4, the smart and dumb battery function including a cycle life function.

7. The ASIC of claim 4, the smart and dumb battery function including a charge control function.

8. The ASIC of claim 4, the smart and dumb battery being a Ni-MH battery.

9. The ASIC of claim 4, the smart and dumb battery being a Li-Ion battery.

10. The ASIC of claim 4, the modular memory IDE interface function including a NAND memory function.

11. The ASIC of claim 4, the modular memory IDE interface function including a CF card function.

12-20 (Withdrawn)

IX. Evidence Appendix (37 C.F.R. §41.37(c)(1)(ix))

None.

X. Related Proceedings Appendix (37 C.F.R. §41.37(c)(1)(x))

None.